FACT SHEET FOR NPDES PERMIT
NO. WA-005104-7

WELLS HYDROELECTRIC PROJECT

SUMMARY

The Douglas County Public Utility District #1 is seeking reissuance of its National Pollutant Discharge Elimination System (NPDES) permit for treated sanitary wastewater from the Wells Hydroelectric Project. The Wells Hydroelectric Project is located on the Columbia River 50 miles north of Wenatchee, Washington. The treatment plant serves the project staff and a varying number of visitors throughout the year. Average project population is approximately 40 persons per day.

The facility provides treatment to a small stable service area, with no plans for expansion of the service area, nor planned plant upgrades or modifications. The discharge volume of effluent is very small relative to the flow volume of the receiving water. The facility has remained in compliance with the previous permit. Therefore, this permit continues the current effluent limitations, monitoring schedule and other permit conditions.

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington (State) on the basis of Chapter 90.48 RCW which defines the Department of Ecology's (Department) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), technical criteria for discharges from municipal wastewater treatment facilities (Chapter 173-221 WAC) and water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the State is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit.

This permit is issued according to protocols that apply screening criteria to assess key environmental protection parameters. It is designed to apply to selected minor dischargers that, based on the available information, the Department believes have proved to pose a relatively low environmental impact potential to its receiving water environment. The permit contains the technology-based effluent limitations as given in the Code of Federal Regulations (CFR) 40 CFR Part 133 (federal) and in Chapter 173-221 WAC (state). A preliminary assessment of the discharge's potential for exceedance of the water quality standards for chlorine and ammonia has been made. Where there is a lack of adequate data indicating the discharger's potential for exceedance of the water quality criteria, this permit does not include water quality-based numeric effluent limitations. Based on the Department's preliminary evaluation, the permit may include monitoring requirements and/or specified measures to control discharges of these toxic pollutants.

One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

This fact sheet has been reviewed by the Permittee and errors in fact have been corrected. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments (Appendix C) will become part of the file on the permit and parties submitting comments will receive a copy of the

Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix C--Response to Comments.

GENERAL INFORMATION	
Applicant	Douglas County PUD #1
Facility Name and Address	Wells Hydroelectric Project 28905 U. S. Highway 97 Pateros, WA 98846
Type of Treatment	Package Treatment Plant with Activated Sludge and Clarification
Discharge Location	Columbia River, River Mile 515 Latitude: 47º 56' 48" N Longitude: 119º 51' 57" W.
Water Body ID Number	WA-CR-1040 and NN57SG

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

The Wells Dam Wastewater Treatment Facility is an Emcee Corporation No. 3 aerobic digestion package plant. The treatment facility is located on the west bank of the Columbia River. The plant provides treatment of sanitary wastewater from the employee restroom and shower, control room restroom and kitchen, machine shop restroom and visitor restrooms. The plant was installed in 1966.

The Permittee operated a separate treatment facility on the east bank of the river. The plant was of similar design, but with a smaller treatment capacity. In January 1990, the east side treatment facility was closed down and flows conveyed to the west side plant, because the former was violating its permit limitations due to insufficient influent loadings.

Collection System

Influent from the Wells Hydroelectric Project consists entirely of domestic wastewater generated from employee and visitor restroom facilities, employee kitchen areas and 3 deep sinks in

janitorial closets. Wastewater from the visitors area is delivered to the treatment plant by gravity flow. Flows from other sources are pumped through the collection system with the aid of two 50 gallon per minute (gpm) sewage ejector pumps.

Two Smith and Loveless 50-gallon single pneumatic ejectors are used to deliver wastewater to the treatment plant. One ejector moves wastewater from the eastside facilities to the westside ejector. The westside ejector then discharges to the treatment plant. The ejector electronic controller system is designed to discharge to the treatment plant small amounts of influent rather than 50 gallons of wastewater each time the ejector operates. Smaller inputs of influent into the treatment plant allow more efficient operation and removal capacity.

Treatment Processes

The treatment facility is a pre-manufactured extended aeration package plant designed to provide secondary treatment for small volume flows. Influent enters the plant at the headworks, where it flows through a barscreen and comminutor. Wastewater then enters an extended aeration tank, where aerobic digestion (decomposition) occurs, creating what is termed mixed liquor.

Treatment Facility Classification and Staffing

The Wells Dam Treatment Facility is categorized as a Class I facility based on the component parts and complexity of package plant operations. The treatment plant operator must be at least a Class I operator certified by the State of Washington.

The facility is typically staffed by the Operations Supervisor (Class I certified operator), with miscellaneous duties handled by one or two hydroelectric plant trainees. Normal hours are 7:00 a.m. to 5:30 p.m., Monday through Thursday. This level of attention is normally sufficient for small extended aeration package plants, provided routine process control and adequate preventative maintenance are performed.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to the Columbia River which is designated as a Class A receiving water in the vicinity of the outfall. This segment of the Columbia River is impaired for total dissolved gas according to the 303(d) list. Characteristic uses include the following:

> Water supply (domestic, industrial, agricultural); stock watering; fish migration; fish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation.

Water quality of this class shall meet or exceed the requirements for all or substantially all uses.

Discharge Outfall and Dilution

An enclosed pipe containing treated and disinfected effluent enters into a generator cooling water discharge pipe. Once inside this cooling water pipe, mixing occurs for 122 feet. The cooling water pipe then discharges into a large concrete draft tube, where further mixing occurs. Effluent is discharged into the Columbia River 73 feet below the downstream average surface level. The outfall is the draft tube exit for turbine #1, at the far west end of the dam.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required.

PERMIT STATUS

The previous permit for this facility was issued on September 27, 1993. The previous permit placed effluent limitations on 5-day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), pH, Fecal Coliform Bacteria, and Total Residual Chlorine.

An application for permit renewal was received by the Department on March 31, 1998 and accepted by the Department on July 10, 1998.

COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT

Parameter	Existing Permit Limits		Proposed Permit Limits	
	Monthly Average	Weekly Average	Monthly Average	Weekly Average
	Technology Based Limits			
BOD	30 mg/L 85 % removal 1.00 lb/day	45 mg/L 1.51 lb/day	30 mg/L 85 % removal 1.00 lb/day	45 mg/L 1.51 lb/day
TSS	30 mg/L 85 % removal 1.00 lb/day	45 mg/L 1.51 lb/day	30 mg/L 85 % removal 1.00 lb/day	45 mg/L 1.51 lb/day
Fecal Coliform	200/100 mL	400/100 mL	200/100 mL	400/100 mL
pH	6 to 9 standard units		6 to 9 standard units	
	Water Quality Based Limits			
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Chlorine	1 mg/L;	1 mg/L	1 mg/L 0.03 lbs/day	1 mg/L 0.03 lbs/day

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the NPDES application and in discharge monitoring reports. The effluent is characterized as follows:

Table 1: Wastewater Characterization

Parameter	Annual Average	Lowest Monthly Average	Highest Monthly Average
Flow (MGD)	0.000730	0.000606	0.000865
BOD_5 (mg/L)	5.1	2.0	14.5
TSS (mg/L)	10.1	3.5	18.5
Fecal Coliform (colonies per 100 mL)	NR	NR	TNTC
Total Residual Chlorine (mg/L)	0.58	0.45	0.71
Ammonia Nitrogen (mg of N/L)	NR	NR	NR
Temperature, summer (degree Fahrenheit)	81	74	85
Temperature, winter (degree Fahrenheit)	72	68	79
pH	low pH = 6.7 high pH = 7.0		

NR-Not reported; effluent has not been analyzed for ammonia.
TNTC-To numerous to count.

PROPOSED PERMIT LIMITATIONS AND CONDITIONS

Federal and State regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations for municipal discharges are set by regulation (40 CFR 133, and Chapters 173-220 and 173-221 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC) or Sediment Quality Standards (Chapter 173-204 WAC). The most stringent of these types of limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

DESIGN CRITERIA

In accordance with WAC 173-220-130(1)(a), effluent limitations shall not be less stringent than those based upon the design criteria for the facility, which are contained in approved engineering plans, reports, or approved revisions. Also, in accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria.

The design criteria for this treatment facility are taken from the fact sheet to the previous permit and are as follows:

Table 2: Design Standards for Wells Dam WWTP

Parameter	Design Quantity
Monthly average flow (max month) (MGD)	0.004
BOD influent loading (lb./day)	10.0
TSS influent loading (lb./day)	11.7
Design population equivalent (# of people)	160

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

A compliance inspection without sampling was conducted on April 25, 1997. The plant was found to be in good operating order; however, the Permittee was directed to update the Operation and Maintenance Manual and to reevaluate safety procedures for handling caustic materials. The revised O & M Manual was approved by the Department on July 30, 1997.

During the history of the previous permit, the Permittee has generally remained in compliance, based on Discharge Monitoring Reports (DMRs) submitted to the Department and inspections conducted by the Department. Prior to May 1997, fecal coliform effluent limits were exceeded, but only marginally. In addition, occasionally the percent suspended solids removed did not reach the 85% permit requirement. However, on those occasions, the suspended solids effluent limits were not exceeded. Since May 1997 the facility has been in complete compliance with its permit.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Municipal wastewater treatment plants are a category of discharger for which technology-based effluent limits have been promulgated by federal and state regulations. These effluent limitations are given in the Code of Federal Regulations (CFR) 40 CFR Part 133 (federal) and in Chapter 173-221 WAC (state). These regulations are performance standards that constitute "all known available and reasonable methods of prevention, control, and treatment" (AKART) for municipal wastewater.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The

Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state.

In the absence of data indicating otherwise, the discharge is believed to have a relatively low adverse environmental impact potential and, therefore, the permit does not have extensive effluent and receiving water data gathering and monitoring requirements. However, a preliminary evaluation of the discharge's potential for exceedance of the water quality standards for chlorine and ammonia was made. Based on this preliminary evaluation, described in the following section, the discharger does not have a reasonable potential for exceedance of the water quality standards for the toxic pollutants.

CONSIDERATION OF SURFACE WATER QUALITY-BASED CRITERIA

Critical Conditions

Determination of the reasonable potential for exceedance of the surface water standards quality standards are made for the waterbody's critical conditions, which represents the receiving water and waste discharge conditions with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

Mixing Zones

The Water Quality Standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving AKART and in accordance with other mixing zone requirements of WAC 173-201A-100.

Effluent from the Wells Dam Wastewater Treatment Facility mixes vigorously with generous amounts of generator cooling water prior to being discharged into the river. Therefore, in the best professional judgment of the Department, no mixing zone is necessary.

Chlorine Considerations

Based on the Department's preliminary assessment of the effluent mixing and dilution in the receiving water, the discharge from this facility does not have a reasonable potential for exceedance of the water quality chlorine standards. The permit requires that the permittee shall not use chlorine concentrations in excess of that necessary to reliably achieve coliform limits in the permit.

Ammonia Considerations

Based on the Department's preliminary assessment of the effluent mixing and dilution in the receiving water, the discharge from this facility does not have a reasonable potential for exceedance of the ammonia criteria in the receiving water.

MONITORING AND REPORTING

Effluent monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring and testing schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. The required monitoring frequency is consistent with agency guidance given in the current version of the Department's Permit Writer's Manual.

OTHER PERMIT CONDITIONS

PREVENTION OF FACILITY OVERLOADING

Overloading of the treatment plant is a violation of the terms and conditions of the permit. To prevent this from occurring, RCW 90.48.110 and WAC 173-220-150 require the Permittee to take the actions detailed in proposed permit requirement S4. to plan expansions or modifications before existing capacity is reached and to report and correct conditions that could result in new or increased discharges of pollutants. Condition S4. restricts the amount of flow.

OPERATION AND MAINTENANCE (O&M)

The proposed permit contains Special Condition S5. is authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

The current O & M Manual was approved by the Department July 30, 1997. There are no upgrades or modifications of the treatment facility planned in the foreseeable future. Therefore, although the Permittee is required to review the manual annually, update of the manual is not required unless the treatment plant or operating procedures are modified.

RESIDUAL SOLIDS HANDLING

To prevent water quality problems the Town is required in the proposed permits Condition S6. to manage all residual solids (grit, screenings, scum, sludge and solid waste) in accordance with the requirements of: (1) RCW 90.48.080 and Water Quality Standards; (2) applicable sections of 40 CFR Part 503 and Chapter 173-308 WAC, "Biosolids Management"; (3) applicable sections of Chapter 173-304 WAC, "Minimum Functional Standards for Solid Waste Handling."

The final use and disposal of biosolids shall be done in accordance with: (1) Chapter 173-308 WAC; (2) 40 CFR Part 503; and (3) requirements of the state general permit for biosolids management. The disposal of solid waste is regulated by the local jurisdictional health department in accordance with state solid waste regulations.

OUTFALL EVALUATION

Effluent is discharged to the river through a generator cooling water pipe. There is no conventional outfall or diffuser at this site; therefore, the permit does not contain a requirement for an outfall evaluation.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards, Sediment Quality Standards, or Ground Water Standards, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. The Department proposes that this permit be reissued for five (5) years.

REVIEW BY THE PERMITTEE

This permit was reviewed by the Permittee for verification of facts. Only factual items were corrected in the draft permit and fact sheet.

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on August 6 and August 13, 1998 in the Quad City Herald to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on October 29, 1998 in the Quad City Herald to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and the reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (509) 575-2821, or by writing to the address listed above.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation--The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. If only one sample is taken during the calendar month, the maximum daily effluent limitation applies to that sample.

Average Weekly Discharge Limitation --The highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The daily discharge is calculated as the average measurement of the pollutant over the day.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Class 1 Inspection--A walk-through inspection of a facility that includes a visual inspection and some examination of facility records. It may also include a review of the facility's record of environmental compliance.

Class 2 Inspection--A walk-through inspection of a facility that includes the elements of a Class 1 Inspection plus sampling and testing of wastewaters. It may also include a review of the facility's record of environmental compliance.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Combined Sewer Overflow (CSO)--The event during which excess combined sewage flow caused by inflow is discharged from a combined sewer, rather than conveyed to the sewage treatment plant because either the capacity of the treatment plant or the combined sewer is exceeded.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Daily Maximum Discharge Limitation--The greatest allowable value for any calendar day.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the effluent fraction.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Infiltration and Inflow (I/I)--"Infiltration" means the addition of ground water into a sewer through joints, the sewer pipe material, cracks, and other defects. "Inflow" means the addition of rainfall-caused surface water drainage from roof drains, yard drains, basement drains, street catch basins, etc., into a sewer.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Significant Industrial User (SIU)--

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C--RESPONSE TO COMMENTS

Correction by Permit Writer

It was erroneously stated in the fact sheet summary that no treatment plant upgrades or modifications are planned. In fact, an upgrade is planned to replace the present chlorine disinfection system with a ultraviolet (UV) system, but the timeline has not been determined. The Permittee is required to submit a Letter of Proposal detailing the proposed upgrade. Special Condition S7. of the permit contains the specific requirements of the letter.

Special Condition S2. of the permit allows for discontinuation of monitoring for total residual chlorine once the upgrade has been made. The Permittee is required to update the facility's O & M Manual to address operation and maintenance of the UV disinfection process and associated changes in the monitoring schedule.

Comment Letter from Permittee

Operator Comment: During an inspection of our wastewater treatment facilities in July of 1993, it was suggested that one employee be dedicated to the wastewater treatment plant for daily testing, inspection and routine maintenance. Presently, testing and inspection is performed by one of several Hydroelectric Operators on shift. I am Group I certified and am responsible for operating within the parameters of our permit, although I do not do the daily tests. Is it still the Department of Ecology's recommendation that one employee be trained and be responsible for the treatment plant operation?

Response: WAC 173-230-040(1) states: After July 1, 1974, it shall be unlawful for any person, . . . to operate a wastewater treatment plant unless the operator . . . holds a valid certification of at least the same classification as that of the wastewater treatment plant being operated. Earlier in the regulation "operator" is defined as an individual who performs routine duties onsite which may affect plant performance or effluent quality.

The Department interprets this regulation to mean that any individual who does operation or maintenance of the plant must be state-certified. However, an individual who takes samples only is not required to be certified. From a practical standpoint, designation of one individual as operator on each shift that the treatment plant is running would provide greater continuity with process control and less likelihood of problems due to miscommunication.